

***PSYCHONOCTUA MASONI* (SCHAUS), NEW COMBINATION
(LEPIDOPTERA: COSSIDAE: ZEUZERINAE),
REDESCRIPTION AND FIRST RECORDS
FROM TEXAS AND USA**

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Abstract.—*Psychonoctua masoni* (Schaus), a new combination, is redescribed and reported for the first time from Texas and USA. Males, wing venation, and genitalia are figured.

Although this interesting cossid was first collected in Texas as early as 1961, it first came to the attention of the senior author when he collected it in extreme south Texas in 1965 and 1974. It was initially thought to represent a new species of *Xyleutes* Hübner, closely related to *Xyleutes masoni* (Schaus). Through the kind assistance of Ronald W. Hodges, Agricultural Research Service, USDA and Chen W. Young at the Carnegie Museum of Natural History, a series of specimens of *masoni* was obtained for comparison. It was evident from examination of the specimens that all represent *masoni*, a species that is quite variable in size and pattern. This species was originally described as *Zeuzera masoni* (Schaus, 1894), from an unspecified number of males from Jalapa, Mexico. The Schaus and Barnes Collection in the USNMNH and CMNH, contains a series of 19 males from Quirigua and Cayuga, Guatemala. This species was first collected in the USA by R. L. Wescott in 1961, from extreme south Texas. The senior author later collected 14 males and the junior author 13 males, all from extreme south Texas. The female remains unknown. Dyar and Schaus (1937) places *masoni* in *Xyleutes*, where it has remained until the present.

In his unpublished manuscript revision of the New World Zeuzerinae, the late Harry K. Clench reassigned *masoni* to *Psychonoctua* Grote. Julian P. Donahue (1980), based on part of Clench's manuscript, resurrected the genus *Morpheis* Hübner from synonymy under *Xyleutes* (strictly an Old World genus) and described a new species from Arizona. In that paper Donahue noted that "Several American species formerly placed in *Xyleutes* . . . are not referable to *Morpheis*, but belong in *Psychonoctua* Grote (1866) or an undescribed genus." Anticipating Donahue (in press) we here transfer *masoni* to *Psychonoctua*.

Grote (1866: 249) proposed the genus *Psychonoctua* (in the Psychidae), with one included species, *P. personalis* Grote (1866: 251), from Cuba. The generic description agrees well with *masoni* in regard to venation, but there is little else to distinguish it from other Zeuzerinae. According to J. P. Donahue (pers. comm.), the key distinguishing feature of *Psychonoctua* from other New World Zeuzerinae

is the presence of an arolium between the tarsal claws. This structure is present in *masoni* and 12 other nominal species placed in *Psychonoctua* by Donahue (in press). Although *masoni* is somewhat similar in pattern to the species of *Morpheis* illustrated by Donahue (1980), *Morpheis* lacks an arolium and also differs in forewing venation and male genitalia.

Psychonoctua masoni (Schaus), NEW COMBINATION

Figs. 1-16

Zeuzera masoni Schaus, 1894: 235.

Xyleutes masoni; Dyar & Schaus, 1937: 1266, pl. 167e.

Head.—Front and vertex grayish brown. Labial palpi light brown, ascending, closely appressed to front. Antennae whitish, bipectinate from base to about $\frac{1}{2}$ total length, shortly uniserrate beyond.

Thorax.—Vestiture fine, closely appressed. Patagia light gray margined outwardly with a fine blackish line. Mesonotum light gray with a central black triangle, apex directed cranially, sometimes filled with light gray. Posteriorly, there is a small black dorsal scale tuft flanked by black spots at the lower angles of the mesonotal triangle. Ventrally rough scaled, light gray. Legs light gray, tarsi with 4 or 5 black bands.

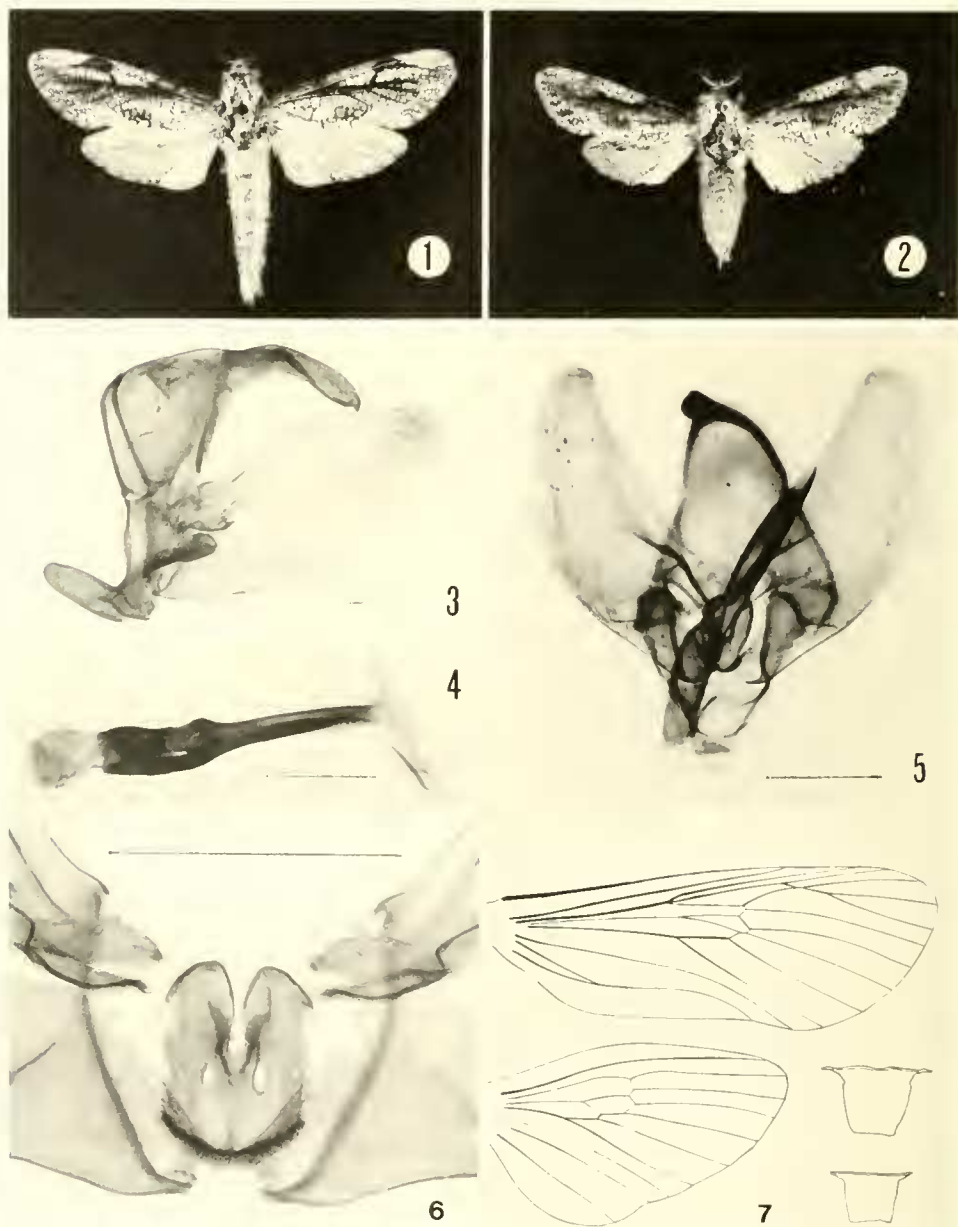
Abdomen.—Vestiture fine, hairlike, light gray, with slightly darker spots on each segment dorsally and a dark gray lateral line.

Maculation (Figs. 1, 2, 8-16).—Forewing light ochreous gray, rather evenly reticulated with a network of fine black lines. Basal $\frac{1}{3}$ of costa black, followed by a series of spaced, black costal spots, that at $\frac{2}{3}$ most conspicuous. Basal black costal patch continuous with a black streak above and along median vein. This median black streak extends well beyond the discal cell, more than half the distance between it and termen. Below median vein, there is great variability in the extent of black shading, which, in some cases (Fig. 14), is very heavy, nearly covering the entire discal cell and extending posteriorly to 1A shortly beyond the middle of the wing. In most specimens, the black shading is weakly indicated below the median vein. Anteriorly, a short black spur extends beyond median streak along the upper discocellular vein, joining the black costal spot at $\frac{2}{3}$ the distance from base. This outer black costal spot is also variable in size and intensity. Hindwing light ochreous gray, with, or without blackish reticulation, which is most prominent along the distal half of vein 2A. Between vein 2A and anal margin, reticulation always absent. Fringes of both wings checkered with brown at vein ends, the spots smaller than the whitish interspaces.

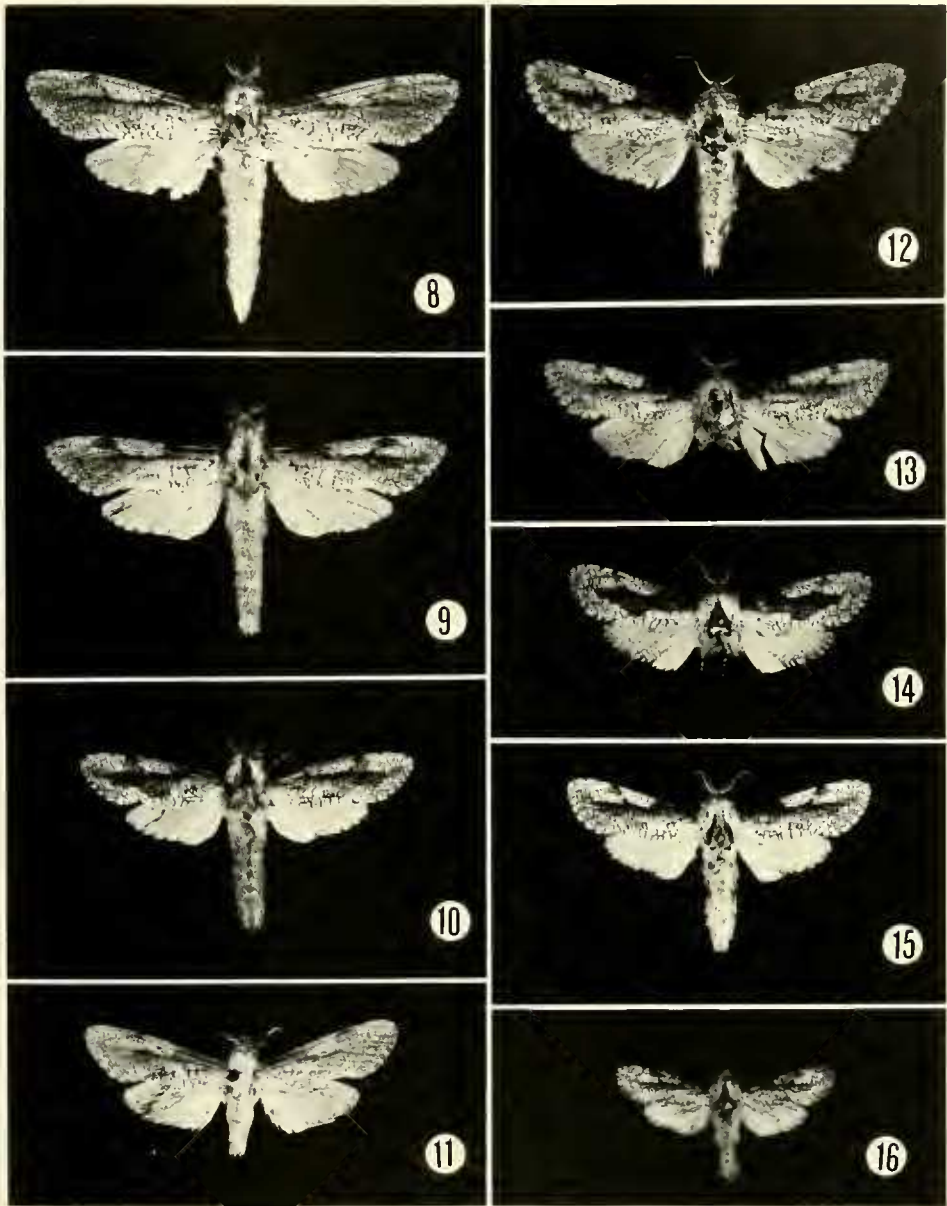
Length of forewing.—*Males*: Texas specimens (N = 14), 10.7-19.8 mm, average 16.1 mm; Mexican and Guatemalan specimens (N = 6), 16.0-25.0 mm, average 21.8 mm; average of all specimens 17.8 mm. "Expanse" of type, as stated in original description, 51 mm, which would be near the upper limit of size range of specimens examined.

Wing venation as shown in Fig. 7 (part).

Male genitalia (Figs. 3-7(part), all from Texas specimens). The genitalia of two specimens from Guatemala were also studied and no significant differences could be found from Texas specimens. The lectotype was dissected by Dr. Hodges, who found it identical to Guatemalan examples dissected by the senior author.



Figs. 1-7. *Psychonoctua masoni* (Schaus), all males. 1, Quirigua, Guatemala, USNMNH. 2, Santa Ana NWR, Hidalgo Co., Texas. 3, Genitalia, lateral view, aedeagus and left valve removed, on slide AB 4932, same locality. 4, Aedeagus with partially inflated vesica, showing single thin cornutus, on slide AB 5296, same locality as 2. 5, Genitalia, ventral view, aedeagus in situ, on slide AB 3264a, same data as 2. 6, Enlargement of juxta, in situ, tegumen, vinculum, and membranous portion of anellus removed, on slide ECK 992, same locality as 2. 7, Wing venation, on slide AB 4931, and outlines of sclerotization of 8th abdominal segment, sternite above, on slide AB 4932, same data as 3. Segments in Figs. 3, 4, 5, 6 represent 1 mm.



Figs. 8–16. *Psychonoctua masoni* (Schaus). 8. Quirigua, Guatemala, USNMNH. 9. Same data as 8. 10. Quirigua, Guatemala, USNMNH. 11. Cayuga, Guatemala, USNMNH. 12–15, Santa Ana NWR, Hidalgo Co., Texas, 21-V-74. 16. Same locality as Fig. 12, 15-IX-74.

Female, early stages, and host unknown.—Larvae of the related *Psychonoctua personalis* Grote are stem borers in several plants including coffee, in which they are considered a minor pest.

Lectotype, ♂, in USNMNH, bearing the following labels: (1) “Jalapa, Mex.”;

(2) "Zeuzera masoni Schs. Type"; (3) "Collection Wm. Schaus"; (4) "Type 12569 U.S.N.M." (5) "Genitalia Slide By RWH Male USNMNH 12090."

Specimens examined: GUATEMALA: Quirigua, March, 3 ♂ (one with genitalia on slide USNM 52458, by A. Blanchard); same locality, May, 1 ♂, all in USNM; Cayuga, May, 1 ♂ (genitalia on slide C.699), in CMNH, all Schaus & Barnes collection. MEXICO: Cordoba, 4-IV-08, 1 ♂; Sinaloa, 1 ♂, both in USNMNH. TEXAS: Cameron Co., Brownsville, 8-V-67, 1 ♂, collected by A. & M. E. Blanchard; Southmost, 2-VI-84, 1 ♂, collected by E. Knudson. Hidalgo Co., Santa Ana National Wildlife Refuge, 21-V-65, 1 ♂ (wings on slide AB 4931.1, genitalia on slide AB 4931.2); 6-V-67, 3 ♂ (one with genitalia on slide AB 5297); 21-V-74, 8 ♂ (3 with genitalia on slides AB 3264 a, b, & c, AB 3945, and AB 5296); 15-IX-74, 1 ♂ (genitalia on slide AB 5310), all collected by A. & M. E. Blanchard; same locality, 31-X-83, 1 ♂; 1-VI-84, 11 ♂ (one with genitalia on slide ECK 992), collected by E. Knudson.

Remarks.—As indicated above, this species is evidently extremely variable in size and maculation. The examples from Guatemala and Mexico tend to average somewhat larger and less maculate than the Texas examples; however, Guatemalan specimens shown in Figs. 1 and 10 are fully as maculate as most Texas specimens, and Guatemalan specimens in Figs. 10 and 11 are equivalent in size to the larger Texas specimens. As there are no discernable genitalic differences between the lectotype studied by Dr. Hodges and all the examples studied by him and the authors, there is little choice but to consider all as conspecific. The lectotype designation for the specimen mentioned above, is made here by the authors, on the advice of Mr. Donahue and Dr. Hodges. Regrettably, this specimen could not be included in the plate, but according to Dr. Hodges (pers. comm.) it is exactly like the specimen shown in Fig. 1. In addition to the above mentioned specimens, there are 14 additional specimens from Quirigua or Cayuga, Guatemala in the USNM. There is also a single male specimen in the Natural History Museum of Los Angeles County, which was collected by R. L. Wescott in Hidalgo Co., Texas, Bentsen Rio Grande Valley State Park, 1-VII-61, identified by Donahue as *masoni*.

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